

AIR QUALITY PERMIT

Issued To: Coronado Resources USA, LLC Permit #2774-01
P.O. Box 18 Administrative Amendment (AA)
Silver Star, MT 59751 Request Received: 01/17/08
Department Decision on AA: 04/08/08
Permit Final: 04/24/08
AFS #777-2774

An air quality permit, with conditions, is hereby granted to Coronado Resources USA, LLC (Coronado), pursuant to Section 75-2-204 and 211, Montana Code Annotated (MCA), as amended, and the Administrative Rules of Montana (ARM) 17.8.740, *et seq.*, as amended for the following:

SECTION I: Permitted Facilities

A. Plant Location

Coronado operates a portable crushing/screening facility that will operate at various locations throughout Montana. Permit #2774-01 applies while operating at any location in Montana, except within those areas having a Department of Environmental Quality (Department)-approved permitting program, areas considered tribal lands, or areas in or within 10 kilometers (km) of certain particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) nonattainment areas. *A Missoula County air quality permit will be required for locations within Missoula County, Montana.* An addendum will be required for locations in or within 10 km of certain PM₁₀ nonattainment areas.

B. Current Permit Action

The current permit action is a transfer of ownership of Permit #2774-01 from Centennial Concrete Inc. (Centennial) to Coronado. In addition, Permit #2774-01 has been updated to reflect current rule references, permit language, and permit format.

SECTION II: Conditions and Limitations

A. Emissions Limitations

1. All visible emissions from any Standards of Performance for New Stationary Source (NSPS)-affected crusher shall not exhibit an opacity of 15% or greater averaged over 6 consecutive minutes. An NSPS-affected crusher is any crusher which was constructed, reconstructed, or modified after August 31, 1983 (ARM 17.8.340 and 40 CFR 60, Subpart OOO).
2. All visible emissions from any other NSPS-affected equipment, such as screens or conveyor transfers, shall not exhibit an opacity of 10% or greater averaged over 6 consecutive minutes. Other NSPS-affected equipment would include any grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station, which was constructed, reconstructed, or modified after August 31, 1983 (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

3. All visible emissions from any non-NSPS affected equipment shall not exhibit an opacity of 20% or greater averaged over 6 consecutive minutes. Non-NSPS affected equipment includes, but is not limited to, any crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station, which was constructed, reconstructed, or modified on or prior to August 31, 1983 (ARM 17.8.304).
4. Water and spray bars shall be available and used, as necessary, to maintain compliance with the opacity limitations in Sections II.A.1, II.A.2, and II.A.3 (ARM 17.8.749).
5. Coronado shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter (ARM 17.8.308).
6. Coronado shall treat all unpaved portions of the haul roads, access roads, parking lots, or the general plant area with water and/or chemical dust suppressant, as necessary to maintain compliance with the reasonable precautions limitation in Section II.A.5 (ARM 17.8.749).
7. Coronado shall not operate more than one crusher at any given time and the maximum rated design capacity shall not exceed 160 tons per hour (tons/hr) (ARM 17.8.749).
8. Total material crushed shall not exceed 1,401,600 tons per rolling 12-month time period (ARM 17.8.749).
9. Coronado shall not operate more than one screen at any given time and the maximum rated design capacity shall not exceed 160 tons/hr (ARM 17.8.749).
10. Total material screened shall not exceed 1,401,600 tons per rolling 12-month time period (ARM 17.8.749).
11. Coronado shall not operate more than two diesel-engine fired generators and the combined maximum rated design capacity of the engines shall not exceed 300 horsepower (hp) (ARM 17.8.749).
12. If the permitted equipment is used in conjunction with any other equipment owned or operated by Coronado, at the same site, production shall be limited to correspond with an emission level that does not exceed 250 tons during any rolling 12-month period. Any calculations used to establish production levels shall be approved by the Department (ARM 17.8.749).
13. Coronado shall comply with all applicable standards and limitations, and the reporting, record keeping, testing, and notification requirements contained in 40 CFR 60, Subpart OOO (ARM 17.8.340 and 40 CFR 60, Subpart OOO).

B. Testing Requirements

1. All compliance source tests shall conform to the requirements of the Montana Source Test Protocol and Procedures Manual (ARM 17.8.106).
2. The Department may require further testing (ARM 17.8.105).

C. Operational Reporting Requirements

1. If this crushing/screening facility is moved to another location, an Intent to Transfer form must be sent to the Department's Air Resources Management Bureau and a Public Notice Form for Change of Location must be published in a newspaper of general circulation in the area to which the transfer is to be made, at least 15 days prior to the move. The proof of publication (affidavit) of the Public Notice Form for Change of Location must be submitted to the Department prior to the move. These forms are available from the Department (ARM 17.8.749 and ARM 17.8.765).

2. Coronado shall supply the Department with annual production information for all emission points, as required by the Department in the annual emission inventory request. The request will include, but not be limited to, all sources of emissions identified in the emission inventory contained in the permit analysis.

Production information shall be gathered on a calendar-year basis and submitted to the Department by the date required in the emission inventory request. Information shall be in the units required by the Department. This information may be used for calculating operating fees, based on actual emissions from the facility, and/or to verify compliance with permit limitations (ARM 17.8.505).

3. Coronado shall notify the Department of any construction or improvement project conducted, pursuant to ARM 17.8.745, that would include ***the addition of a new emissions unit***, change in control equipment, stack height, stack diameter, stack flow, stack gas temperature, source location, or fuel specifications, or would result in an increase in source capacity above its permitted operation. The notice must be submitted to the Department, in writing, 10 days prior to startup or use of the proposed de minimis change, or as soon as reasonably practicable in the event of an unanticipated circumstance causing the de minimis change, and must include the information requested in ARM 17.8.745(l)(d) (ARM 17.8.745).
4. Coronado shall document, by month, the crushing production from the facility. By the 25th day of each month, Coronado shall calculate the crushing production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.8. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).
5. Coronado shall document, by month, the screening production from the facility. By the 25th day of each month, Coronado shall calculate the screening production from the facility for the previous month. The monthly information will be used to verify compliance with the rolling 12-month limitation in Section II.A.10. The information for each of the previous months shall be submitted along with the annual emission inventory (ARM 17.8.749).

SECTION III: General Conditions

- A. Inspection – Coronado shall allow the Department's representatives access to the source at all reasonable times for the purpose of making inspections or surveys, collecting samples, obtaining data, auditing any monitoring equipment (CEMS, CERMS), or observing any monitoring or testing, and otherwise conducting all necessary functions related to this permit.
- B. Waiver – The permit and all the terms, conditions, and matters stated herein shall be deemed accepted if Coronado fails to appeal as indicated below.
- C. Compliance with Statutes and Regulations – Nothing in this permit shall be construed as relieving Coronado of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided for in ARM 17.8.740, *et seq.* (ARM 17.8.756)
- D. Enforcement – Violations of limitations, conditions, and requirements contained herein may constitute grounds for permit revocation, penalties, or other enforcement as specified in Section 75-2-401, *et seq.*, MCA.
- E. Appeals – Any person or persons jointly or severally adversely affected by the Department's decision may request, within 15 days after the Department renders its decision, upon affidavit setting forth the grounds therefore, a hearing before the Board of Environmental Review (Board). A hearing shall be held under the provisions of the Montana Administrative Procedures Act. The filing of a request for a hearing does not stay the Department's decision, unless the Board issues a stay upon receipt of a petition and a finding that a stay is appropriate under Section 75-2-211(11)(b), MCA. The issuance of a stay on a permit by the Board postpones the effective date of the Department's decision until conclusion of the hearing and issuance of a final decision by the Board. If a stay is not issued by the Board, the Department's decision on the application is final 16 days after the Department's decision is made.
- F. Permit Inspection – As required by ARM 17.8.755, Inspection of Permit, a copy of the air quality permit shall be made available for inspection by Department personnel at the location of the permitted source.
- G. Permit Fee – Pursuant to Section 75-2-220, MCA, as amended by the 1991 Legislature, failure to pay the annual operation fee by Coronado may be grounds for revocation of this permit, as required by that section and rules adopted thereunder by the Board.
- H. Construction Commencement – Construction must begin within three years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked (ARM 17.8.762).
- I. The Department may modify the conditions of this permit based on local conditions of any future site. These factors may include, but are not limited to, local terrain, meteorological conditions, proximity to residences, etc.

- J. Coronado shall comply with the conditions contained in this permit while operating in any location in Montana, except within those areas that have a Department-approved permitting program.

PERMIT ANALYSIS
Coronado Resources USA, LLC
Permit # 2774-01

I. Introduction/Process Description

A. Permitted Equipment

Coronado Resources USA, LLC (Coronado) owns and operates a portable crushing/screening operation consisting of a crusher (up to 160 tons per hour (TPH)), a screen (up to 160 TPH), up to two diesel engines (up to 300 horsepower (hp) combined capacity) and associated equipment.

B. Process Description

Coronado uses this crushing/screening plant and associated equipment to crush and sort sand and gravel materials for use in various construction operations. For a typical operational setup, unprocessed materials are loaded into the crushing screening plant then conveyed to stockpiles for sale and use in construction operations.

C. Permit History

On April 22, 1993, **Permit #2774-00** was issued to Centennial Concrete, Inc. (Centennial) for the operation of a portable crushing/screening plant.

D. Current Permit Action

The current permit action is a transfer of ownership of Permit #2774-00 from Centennial to Coronado. In addition, the permit has been updated to reflect current rule references, permit language, and permit format. **Permit #2774-01** replaces Permit #2774-00.

II. Applicable Rules and Regulations

The following are partial explanations of some applicable rules and regulations that apply to the facility. The complete rules are stated in the Administrative Rules of Montana (ARM) and are available, upon request, from the Department of Environmental Quality (Department). Upon request, the Department will provide references for location of complete copies of all applicable rules and regulations or copies where appropriate.

A. ARM 17.8, Subchapter 1 – General Provisions, including, but not limited to:

1. ARM 17.8.101 Definitions. This rule includes a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.105 Testing Requirements. Any person or persons responsible for the emission of any air contaminant into the outdoor atmosphere shall, upon written request of the Department, provide the facilities and necessary equipment (including instruments and sensing devices) and shall conduct tests, emission or ambient, for such periods of time as may be necessary using methods approved by the Department.

3. ARM 17.8.106 Source Testing Protocol. The requirements of this rule apply to any emission source testing conducted by the Department, any source, or other entity as required by any rule in this chapter, or any permit or order issued pursuant to this chapter, or the provisions of the Clean Air Act of Montana, 75-2-101, *et seq.*, Montana Code Annotated (MCA).

Coronado shall comply with the requirements contained in the Montana Source Test Protocol and Procedures Manual, including, but not limited to, using the proper test methods and supplying the required reports. A copy of the Montana Source Test Protocol and Procedures Manual is available from the Department upon request.

4. ARM 17.8.110 Malfunctions. (2) The Department must be notified promptly by telephone whenever a malfunction occurs that can be expected to create emissions in excess of any applicable emission limitation or to continue for a period greater than four hours.
5. ARM 17.8.111 Circumvention. (1) No person shall cause or permit the installation or use of any device or any means that, without resulting in reduction of the total amount of air contaminant emitted, conceals, or dilutes an emission of air contaminant that would otherwise violate an air pollution control regulation. (2) No equipment that may produce emissions shall be operated or maintained in such a manner as to create a public nuisance.

B. ARM 17.8, Subchapter 2 – Ambient Air Quality, including, but not limited to:

1. ARM 17.8.210 Ambient Air Quality Standards for Sulfur Dioxide;
2. ARM 17.8.211 Ambient Air Quality Standards for Nitrogen Dioxide;
3. ARM 17.8.212 Ambient Air Quality Standards for Carbon Monoxide;
4. ARM 17.8.220 Ambient Air Quality Standard for Settled Particulate Matter; and
5. ARM 17.8.223 Ambient Air Quality Standard for PM₁₀.

Coronado must maintain compliance with the applicable ambient air quality standards.

C. ARM 17.8, Subchapter 3 – Emission Standards, including, but not limited to:

1. ARM 17.8.304 Visible Air Contaminants. This rule requires that no person may cause or authorize emissions to be discharged into the outdoor atmosphere from any source installed after November 23, 1968, that exhibit an opacity of 20% or greater averaged over 6 consecutive minutes.
2. ARM 17.8.308 Particulate Matter, Airborne. (1) This rule requires an opacity limitation of less than 20% for all fugitive emission sources and that reasonable precautions be taken to control emissions of airborne particulate matter. (2) Under this rule, Coronado shall not cause or authorize the use of any street, road, or parking lot without taking reasonable precautions to control emissions of airborne particulate matter.

3. ARM 17.8.309 Particulate Matter, Fuel Burning Equipment. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter caused by the combustion of fuel in excess of the amount determined by this section.
4. ARM 17.8.310 Particulate Matter, Industrial Process. This rule requires that no person shall cause or authorize to be discharged into the atmosphere particulate matter in excess of the amount set forth in this section.
5. ARM 17.8.322 Sulfur Oxide Emissions--Sulfur in Fuel. This rule requires that no person shall burn liquid, solid, or gaseous fuel in excess of the amount set forth in this section.
6. ARM 17.8.324 Hydrocarbon Emissions--Petroleum Products. (3) No person shall load or permit the loading of gasoline into any stationary tank with a capacity of 250 gallons or more from any tank truck or trailer, except through a permanent submerged fill pipe, unless such tank truck or trailer is equipped with a vapor loss control device as described in (1) of this rule.
7. ARM 17.8.340 Standard of Performance for New Stationary Sources. This rule incorporates, by reference, 40 CFR 60, Standards of Performance for New Stationary Sources (NSPS). The owner or operator of any stationary source or modification, as defined and applied in 40 CFR Part 60, NSPS, shall comply with the standards and provisions of 40 CFR Part 60.

40 CFR 60, Subpart OOO – In order for a crushing/screening plant to be subject to NSPS requirements, the facility must meet the definition of an affected facility and, the affected equipment must have been constructed, reconstructed, or modified after August 31, 1983. Since the equipment was constructed prior to the NSPS applicability date, Coronado is not an NSPS-affected facility under 40 CFR 60, Subpart OOO.

This facility is not currently an NSPS-affected source because it does not meet the definition of any NSPS subpart defined in 40 CFR Part 60. However, in the future, Coronado could be considered an NSPS-affected facility under 40 CFR Part 60, and subject to the requirements of Subpart OOO, if they construct, reconstruct, or modify applicable equipment.

D. ARM 17.8, Subchapter 5 – Air Quality Permit Application, Operation, and Open Burning Fees, including, but not limited to:

1. ARM 17.8.504 Air Quality Permit Application Fees. This rule requires that an applicant submit an air quality permit application fee concurrent with the submittal of an air quality permit application. A permit application is incomplete until the proper application fee is paid to the Department. Coronado was not required to submit a fee with the current permit action because it is considered an administrative action.

2. ARM 17.8.505 Air Quality Operation Fees. An annual air quality operation fee must, as a condition of continued operation, be submitted to the Department by each source of air contaminants holding an air quality permit, excluding an open burning permit, issued by the Department; the air quality operation fee is based on the actual or estimated actual amount of air pollutants emitted during the previous calendar year.

An air quality operation fee is separate and distinct from an air quality permit application fee. The annual assessment and collection of the air quality operation fee, described above, shall take place on a calendar-year basis. The Department may insert into any final permit issued after the effective date of these rules, such conditions as may be necessary to require the payment of an air quality operation fee on a calendar-year basis, including provisions that pro-rate the required fee amount.

E. ARM 17.8, Subchapter 7 – Permit, Construction, and Operation of Air Contaminant Sources, including, but not limited to:

1. ARM 17.8.740 Definitions. This rule is a list of applicable definitions used in this chapter, unless indicated otherwise in a specific subchapter.
2. ARM 17.8.743 Montana Air Quality Permits--When Required. This rule requires a person to obtain an air quality permit or permit alteration to construct, alter or use any air contaminant sources that have the Potential to Emit (PTE) greater than 15 tons per year (TPY) of any pollutant. Coronado has a PTE greater than 15 TPY of nitrous oxides (NO_x) and particulate matter (PM); therefore, an air quality permit is required.
3. ARM 17.8.744 Montana Air Quality Permits--General Exclusions. This rule identifies the activities that are not subject to the Montana Air Quality Permit program.
4. ARM 17.8.745 Montana Air Quality Permits--Exclusion for De Minimis Changes. This rule identifies the de minimis changes at permitted facilities that do not require a permit under the Montana Air Quality Permit Program.
5. ARM 17.8.748 New or Modified Emitting Units--Permit Application Requirements. (1) This rule requires that a permit application be submitted prior to installation, alteration, or use of a source. Coronado was not required to submit a permit application for the current permit action because it is considered an administrative action. (7) This rule requires that the applicant notify the public by means of legal publication in a newspaper of general circulation in the area affected by the application for a permit. Coronado was not required to submit a public notice for the current permit action because it is considered an administrative action.
6. ARM 17.8.749 Conditions for Issuance or Denial of Permit. This rule requires that the permits issued by the Department must authorize the construction and operation of the facility or emitting unit subject to the conditions in the permit and the requirements of this subchapter. This rule also requires that the permit must contain any conditions necessary to assure compliance with the Federal Clean Air Act (FCAA), the Clean Air Act of Montana, and rules adopted under those acts.
7. ARM 17.8.752 Emission Control Requirements. This rule requires a source to install the maximum air pollution control capability that is technically practicable and

economically feasible, except that Best Available Control Technology (BACT) shall be utilized. The required BACT analysis is included in Section III of this permit analysis.

8. ARM 17.8.755 Inspection of Permit. This rule requires that air quality permits shall be made available for inspection by the Department at the location of the source.
 9. ARM 17.8.756 Compliance with Other Requirements. This rule states that nothing in the permit shall be construed as relieving Coronado of the responsibility for complying with any applicable federal or Montana statute, rule, or standard, except as specifically provided in ARM 17.8.740, *et seq.*
 10. ARM 17.8.759 Review of Permit Applications. This rule describes the Department's responsibilities for processing permit applications and making permit decisions on those permit applications that do not require the preparation of an environmental impact statement.
 11. ARM 17.8.762 Duration of Permit. An air quality permit shall be valid until revoked or modified, as provided in this subchapter, except that a permit issued prior to construction of a new or altered source may contain a condition providing that the permit will expire unless construction is commenced within the time specified in the permit, which in no event may be less than one year after the permit is issued.
 12. ARM 17.8.763 Revocation of Permit. An air quality permit may be revoked upon written request of the permittee, or for violations of any requirement of the Clean Air Act of Montana, rules adopted under the Clean Air Act of Montana, the FCAA, rules adopted under the FCAA, or any applicable requirement contained in the Montana State Implementation Plan (SIP).
 13. ARM 17.8.764 Administrative Amendment to Permit. An air quality permit may be amended for changes in any applicable rules and standards adopted by the Board of Environmental Review (Board) or changed conditions of operation at a source or stack that do not result in an increase of emissions as a result of those changed conditions. The owner or operator of a facility may not increase the facility's emissions beyond permit limits unless the increase meets the criteria in ARM 17.8.745 for a de minimis change not requiring a permit, or unless the owner or operator applies for and receives another permit in accordance with ARM 17.8.748, ARM 17.8.749, ARM 17.8.752, ARM 17.8.755, and ARM 17.8.756, and with all applicable requirements in ARM Title 17, Chapter 8, Subchapters 8, 9, and 10.
 14. ARM 17.8.765 Transfer of Permit. (1) This rule states that an air quality permit may be transferred from one location to another if the Department receives a complete notice of intent to transfer location, the facility will operate in the new location for less than one year, the facility will comply with the FCAA and the Clean Air Act of Montana, and the facility complies with other applicable rules. (2) This rule states that an air quality permit may be transferred from one person to another if written notice of intent to transfer, including the names of the transferor and the transferee, is sent to the Department.
- F. ARM 17.8, Subchapter 8 - Prevention of Significant Deterioration of Air Quality, including, but not limited to:

1. ARM 17.8.801 Definitions. This rule is a list of applicable definitions used in this subchapter.
2. ARM 17.8.818 Review of Major Stationary Sources and Major Modification--Source Applicability and Exemptions. The requirements contained in ARM 17.8.819 through ARM 17.8.827 shall apply to any major stationary source and any major modification with respect to each pollutant subject to regulation under the FCAA that it would emit, except as this subchapter would otherwise allow.

This facility is not a major stationary source since it is not a listed source and the facility's PTE is less than 250 tons per year of any pollutant (excluding fugitive emissions).

G. ARM 17.8, Subchapter 12 – Operating Permit Program Applicability, including, but not limited to:

1. ARM 17.8.1201 Definitions. (23) Major Source under Section 7412 of the FCAA is defined as any stationary source having:
 - a. PTE > 100 tons/year of any pollutant;
 - b. PTE > 10 tons/year of any one hazardous air pollutant (HAP), PTE > 25 tons/year of a combination of all HAPs, or lesser quantity as the Department may establish by rule; or
 - c. PTE > 70 tons/year of particulate matter with an aerodynamic diameter of 10 microns or less (PM₁₀) in a serious PM₁₀ nonattainment area.
2. ARM 17.8.1204 Air Quality Operating Permit Program Applicability. (1) Title V of the FCAA Amendments of 1990 requires that all sources, as defined in ARM 17.8.1204 (1), obtain a Title V Operating Permit. In reviewing and issuing Montana Air Quality Permit (MAQP) #2774-01 for Coronado, the following conclusions were made:
 - a. The facility's PTE is less than 100 tons/year for any pollutant.
 - b. The facility's PTE is less than 10 tons/year for any one HAP and less than 25 tons/year of all HAPs.
 - c. This source is not located in a serious PM₁₀ nonattainment area.
 - d. This facility is not subject to any current NSPS.
 - e. This facility is not subject to any current National Emission Standards for Hazardous Air Pollutants (NESHAP) standards.
 - f. This source is not a Title IV affected source or a solid waste combustion unit.
 - g. This source is not an Environmental Protection Agency (EPA) designated Title V source.

Based on these facts, the Department determined that this facility is a minor source

with respect to the Title V Operating Permit program and therefore, is not subject to the Title V Operating Permit Program.

III. BACT Determination

A BACT determination is required for each new or altered source. Coronado shall install on the new or altered source the maximum air pollution control capability which is technically practicable and economically feasible, except that BACT shall be utilized. A BACT determination was not required for the current permit action because the permit change is considered an administrative permit change.

IV. Emission Inventory--Permit #2774-01

Emitting Unit	Tons per Year					
	PM	PM ₁₀	NO _x	CO	VOC	SO _x
1964 Cedar Rapids Primary Jaw Crusher (160 TPH)	0.84	0.39	0.00	0.00	0.00	0.00
Screen (up to 160 TPH)	0.18	0.49	0.00	0.00	0.00	0.00
Truck Unloading	0.013	0.013	0.00	0.00	0.00	0.00
Material Transfer	0.57	0.18	0.00	0.00	0.00	0.00
Pile Forming	4.47	2.10	0.00	0.00	0.00	0.00
Bulk Loading	0.001	0.001	0.00	0.00	0.00	0.00
Up to 2 Diesel engines (up to 300 hp)	2.89	2.89	40.73	8.78	3.25	2.69
Haul Roads	12.68	3.60	0.00	0.00	0.00	0.00
Total	21.64	9.66	40.73	8.78	3.25	2.69

CRUSHER - (SCC 3-05-030-03, controlled)

1964 Cedar Rapids Primary Jaw Crusher (160 TPH)

Process Rate: 160 ton/hr 1,401,600 tons/year unrestricted

Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor: 0.0012 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
 Calculations: 0.0012 lbs/ton * 160 tons/hr = 0.19 lb/hr
 0.19 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.84 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor: 0.00054 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
 Calculations: 0.00054 lbs/ton * 160 tons/hr = 0.09 lb/hr
 0.09 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.39 ton/yr

SCREEN - (SCC 3-05-020-02,-03, controlled)

Screen (160 TPH)

Process Rate: 160 ton/hr

Hours of operation: 8760 hr/yr

PM Emissions (controlled):

Emission Factor: 0.0022 lbs/ton (AP-42 Section 11.19.2-2, 8/2004)
 Calculations: 0.0022 lbs/ton * 160 tons/hr = 0.04 lb/hr
 0.04 lb/hr * 8760 hr/yr * 0.0005 ton/lb = 0.18 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor:	0.00074 lbs/ton	(AP-42 Section 11.19.2-2, 8/2004)
Calculations:	0.00074 lbs/ton * 160 tons/hr =	0.11 lbs/hr
	0.11 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.49 tons/yr

Material Transfer (SCC 3-05-020-06, controlled)

Truck Unloading (1)

Process Rate:	160 ton/hr
Number of Loads	1 Loads
Hours of operation:	8760 hr/yr

PM Emissions (controlled):

Emission Factor:	1.60E-05 lbs/ton	(AP-42 Section 11.19.2-2, 8/2004)
Calculations:	0.000016 lbs/ton * 160 ton/hr * 1 Loads =	0.003 lb/hr
	0.003 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.013 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor:	1.60E-05 lbs/ton	(AP-42 Section 11.19.2-2, 8/2004)
Calculations:	0.000016 lbs/ton * 160 ton/hr * 1 Loads =	0.003 lb/hr
	0.003 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.013 ton/yr

Material Transfer (6)

Process Rate:	160 ton/hr
Number of Transfers	6 Transfers
Hours of operation:	8760 hr/yr

PM Emissions (controlled):

Emission Factor:	0.00014 lbs/ton	(AP-42 Section 11.19.2-2, 8/2004)
Calculations:	0.00014 lbs/ton * 160 ton/hr * 6 Transfers =	0.13 lb/hr
	0.13 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.57 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor:	4.60E-05 lbs/ton	(AP-42 Section 11.19.2-2, 8/2004)
Calculations:	0.000046 lbs/ton * 160 tons/hr * 6 Transfers =	0.04 lb/hr
	0.04 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.18 ton/yr

Pile Forming (2)

Process Rate:	160 ton/hr
Number of Piles	2 Piles
Hours of operation:	8760 hr/yr

PM Emissions (controlled):

Emission Factor:	0.0032 lbs/ton	(AP-42 Section 13.2.4, 1/95)
Calculations:	0.0032 lbs/ton * 160 ton/hr * 2 Piles =	1.02 lb/hr
	1.02 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	4.47 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor:	0.0015 lbs/ton	(AP-42 Section 13.2.4, 1/95)
Calculations:	0.0015 lbs/ton * 160 ton/hr * 2 Piles =	0.48 lb/hr
	0.48 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	2.10 ton/yr

Bulk Loading

Process Rate:	160 ton/hr
Number of Loads	1 Load
Hours of operation:	8760 hr/yr

PM Emissions (controlled):

Emission Factor:	1.6E-06 lbs/ton	(AP-42 Section 11.19.2-2, 8/2004)
Calculations:	1.6E-06 lbs/ton * 160 ton/hr * 1 Load =	2.6E-04 lb/hr
	2.6E-04 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.001 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor:	1.6E-06 lbs/ton	(AP-42 Section 11.19.2-2, 8/2004)
Calculations:	1.6E-06 lbs/ton * 160 ton/hr * 1 Load =	2.6E-04 lb/hr
	2.6E-04 lb/hr * 8760 hr/yr * 0.0005 ton/lb =	0.001 ton/yr

Haul Roads

Vehicle miles traveled (estimate):	5 VMT/day
Control Efficiency is included in Emission Factor	

PM Emissions (controlled):

Emission Factor (Rated Load Capacity <50 tons):	<u>13.90</u> Lbs/VMT	(AP-42 Section 13.2.2, 12/03)
Calculations:	5 VMT/day * 13.90 Lbs/VMT =	69.5 lb/day
		12.68 ton/yr

PM₁₀ Emissions (controlled):

Emission Factor (Rated Load Capacity <50 tons):	<u>3.95</u> Lbs/VMT	(AP-42 Section 13.2.2, 12/03)
Calculations:	5 VMT/day * 3.95 Lbs/VMT =	19.75 lb/day
		3.60 ton/yr

Up to two Diesel Engines (up to 300 HP)

PM Emissions

Emission Factor:	0.0022 lbs/hp-hr	(AP-42, 3.3-1, 10/96)
Calculations:	0.0022 lbs/hp-hr * 300 hp * 8760 hr/yr * 0.0005 ton/lb =	2.89 ton/yr

PM₁₀ Emissions

Emission Factor:	0.0022 lbs/hp-hr	(AP-42, 3.3-1, 10/96)
Calculations:	0.0022 lbs/hp-hr * 300 hp * 8760 hr/yr * 0.0005 ton/lb =	2.89 ton/yr

NO_x Emissions

Emission Factor:	0.0310 lb/hp-hr	(AP-42, 3.3-1, 10/96)
Calculations:	0.0310 lb/hp-hr * 300 hp * 8760 hr/yr * 0.0005 ton/lb =	40.73 ton/yr

VOC Emissions

Emission Factor: 0.00247 lb/hp-hr (AP-42, 3.3-1, 10/96)
Calculations: $0.00247 \text{ lb/hp-hr} * 300 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 3.25 \text{ ton/yr}$

CO Emissions

Emission Factor: 0.00668 lb/hp-hr (AP-42, 3.3-1, 10/96)
Calculations: $0.00668 \text{ lb/hp-hr} * 300 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 8.78 \text{ ton/yr}$

SO_x Emissions

Emission Factor: 0.00205 lb/hp-hr (AP-42, 3.3-1, 10/96)
Calculations: $0.00205 \text{ lb/hp-hr} * 300 \text{ hp} * 8760 \text{ hr/yr} * 0.0005 \text{ ton/lb} = 2.69 \text{ ton/yr}$

V. Existing Air Quality

Permit #2774-01 is issued for the operation of a portable crushing/screening plant to be operated at various sites throughout Montana. The facility may operate in or within 10 kilometers of certain PM₁₀ nonattainment areas during the summer months and at sites approved by the Department in the winter months. This facility is a portable source that would operate on an intermittent and temporary basis and any effects to air quality will be minor and short-lived.

VI. Ambient Air Quality Impact Analysis

Permit #2774-01 will cover the operation while operating at any location within Montana, excluding those counties that have a Department-approved permitting program and those locations in or within 10 km of certain PM₁₀ nonattainment areas. The Department believes the amount of controlled emissions generated by this facility will not exceed any set ambient standard. In addition, this source is portable and any air quality impacts will be minor and short-lived.

VII. Environmental Assessment

An Environmental Assessment was not required for the current permit action because it is considered an administrative action.

Analysis Prepared by: Julie Merkel

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